

Opinions and Self-evaluation of the Students of Geography Department about the Applications of Cooperative Learning in Regional Geography Course

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Abstract

The aim of this study was to determine the opinions and self-evaluation of the students of Geography Department about the applications of Cooperative Learning in Regional Geography course. The study was carried out for twelve weeks with 76 students who are in the Department of Geography, Faculty of Arts, Karabuk University between 2011-12. In this study, descriptive survey model and content analysis were used along with opinion surveys towards cooperative learning, self-evaluation scale, and open-ended semi-structured questionnaire about the applications to collect the data. In the analysis of quantitative data mean, standard deviance, and t-test were applied, while in the analysis of qualitative data content analysis was applied. At the end of the research the students of Geography Department declared that their interest and participation in the course were increased, their social aspects were improved, the lectures were entertaining and there was a positive atmosphere in the classroom thanks to the applications of cooperative learning. In the self-evaluation about the applications, the students stated that most of the students came to class with preparations, they used various resources while preparing a presentation, they carried out their individual responsibilities in the group work and they did their best for the sake of the group's success.

Key Words

Cooperative Learning, Department of Geography, Regional Geography, Self-evaluation, Students' Opinions.

Researchers who presented the problems in teaching of Geography (Akinoğlu, 2005; Doğanay, 2002; Gökçe, 2009; Kayan, 2000; Koçman, 1999; Özey, 1998; Sekin & Ünlü, 2002; Şahin 2003) listed these problems as such; the problem of academicians, the problem of programs, the lack of laboratories with modern equipment, the employment of the graduates, the lack of applied courses and field trips, the quota for students is increased by opening a lot of departments and programs despite the lack of academicians and technical installation, the lack of academic research and the problems in course books (Gökçe, 2009, p. 725).

The theoretical basics of cooperative learning are based on constructivism, and cognitivism which is its reflection in the field of learning (Açıkgöz, 1992; Slavin, 1995). A lot of definitions are included in the relevant paper. Some of them are these: Cooperative learning is a technique in which students work in small groups, each individual of the group is responsible for his learning as well as others', and the assessment group is rewarded (Slavin, 1995). In cooperative learning, heterogenic groups are formed according to their different features, skills and learning style, and the members of the groups work in cooperation. The students in the group

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work both for themselves and others in order to learn. Success is the success of the group with the contribution of each individual. The contribution of the members are calculated in evaluation and the group success is rewarded (Aydın, 2011).

Some conditions need to be met in order for a group work to be called cooperative learning. Johnson and Johnson (1989; 1999) listed these conditions as *positive dependency, personal assessability, face-to-face interaction, social skills and the evaluation of group process*. Açıkgöz (1992; 2006) added *equal opportunity for success and group reward* to these five conditions.

The studies show that cooperative learning includes a number of techniques. The cooperative learning techniques on which the most number of studies have been made and widely used are these: *Co-learning, Team-Game-Tournament, Group Research, Combining, Student Teams Success Divisions, Accelerated Team Learning, Ask Together Learn Together* and *Readapted Combination* (Açıkgöz, 1992; Gömleksiz, 1997; Sucuoğlu, 2003). In this study, the techniques of *Student Teams Success Divisions, Co-learning* and *Group Research* are used.

Co-learning: In this technique, students work on their task with groups of four or five members. A work sheet is given to each group. The members of the group decide what to do and how to work for their aims together. They produce a group work together. The students are rewarded according to their successes in the group and individual work (Açıkgöz, 1992, 2006; Gömleksiz, 1993; Johnson & Johnson, 1994; Slavin, 1996).

Student Teams Success Divisions (STSD): In this technique, the academic gives his lecture and the teams study until they are sure that each member has learned the subject. In the end, all members are examined individually on the subject. The results are compared with the previous ones and students who performed equal to or more than their previous results are rewarded (Açıkgöz, 1992; Slavin 1995, 1996).

Group Research: In this technique there are six steps: i) *Determination of the research topic and dividing students into groups*, ii) *Planning*, iii) *Carrying out the research*, iv) *Writing the final report*, v) *Presenting the final report*, vi) *Evaluation* (Kagan, 1992).

In the recent years, it is clear that the studies which investigate the effects of cooperative learning - whose effects have been researched in different courses and have gained importance in

our country - on teaching Geography are limited. In their studies, the following researchers have reached the result that specific techniques (listed in the sentences below) increase the success and are more effective compared to teacher-based Geography teaching. The technique of "Student Teams Success Divisions (STSD)" in teaching "Physical Geography of Turkey" Sezer and Tokcan (2003), in "The Structure and Formation of Earth" Aydın and Buldur (2004) and in "External Forces" Temizbaş (2005). The technique of "Co-learning" in "Climate Studies" Yüzer (2005). The technique of "Cooperative Learning Supported Multiple Intelligence Theory" in the Geography subject of 6th graders Social Studies Ilgar and Babacan (2012). The technique of "Jigsaw" in "Energy Sources" Özbaş (2006) and in "Pressure and Winds" Şimşek (2007). The technique of "Academic Contraversy" in "The Formation of Geographical Formations" Güven (2007) The technique of "Jigsaw-II" in "Settlements" Acar (2006). As shown, these scientists studied the effects of cooperative learning in the academic success of the students. In abroad, when the effects of cooperative learning on Geography teaching are studied; it is shown that the technique of "Co-learning" in Hertzog and Lieble (1996) "Introduction to Geography", "Jigsaw-II" in the research of Mattingly and Van Sickle (1991), "Group Research" in Tan, Sharan, and Lee (2007) "Contamination and Climate Changes", "Jigsaw-IV" in Holliday (2002) "World Geography" are found to increase the success compared to the conventional teaching methods in teaching Geography. When studies inside the country are examined, the one study in which the students' opinion about the applications of cooperative learning in teaching Geography was carried out by Aydın (2009). The researcher examined the opinions of 10th graders about the activities of cooperative learning in the teaching of the subject "Soil, Water and Flora of Turkey" in Geography course. The students stated that they enjoyed the cooperative learning method and by means of it they grasped the course better, their interest in the course increased and the lectures were more entertaining.

This study is important in terms of its demonstration of how the affective features of the students in Geography course are affected by cooperative learning, its scientific contribution to the development of beneficial and functional Geography teaching, its guidance to teachers about the geography course and its being a resource for the next studies on the subject of cooperative learning. By determining the self-evaluations of students

about the applications it is tried to be detected that how the activities of cooperative learning are beneficial for the students, what kind of difficulties they encountered, what they could do better and what was the best thing they did in the process. As a result, the research question can be defined as: “*What are the opinions and self-evaluation of the students of Geography Department towards cooperative learning in Regional Geography course?*”

Method

Research Design

In this study, two research designs are used together (Scanning and Descriptive Model). Scanning methods are approaches which explain the interaction among situations by considering their relationships between previous events and conditions (Kaptan, 1998, p. 59). Moreover, this study is a descriptive (quantitative) one in which the opinions of students about the applications of cooperation are carried out with open-ended questions and content analysis. The main aims in such studies are to define and explain the situation under consideration (Çepni, 2007).

Research Group

The research group includes 76 first grade students who are in the Department of Geography, Faculty of Arts, Karabuk University. 30 of them are male and 46 are female. 41 of the students are in daytime education and 35 are in evening education.

Data Gathering Devices

Survey towards Cooperative Learning: This scale was developed by Demirdağ and Kartal (2011) to determine the opinions of people about cooperative learning. First of all, the availability of data from the study was tested with *Kaiser-Meyer-Olkin (KMO)* coefficient and *Barlett Sphericity test* (*KMO* coefficient is .88 and relevance for Barlett test is .000 $p < .001$) for factor analysis, and, as a result, it was agreed that they are eligible for analysis. In order to analyze the formal validity and the factorial structure of the survey principal components analysis was used. To analyze the factorial structures, rotated (varimax) principal components analysis was used. At the end of the analysis, the scale was found to have one factorial structure. The rate of this factorial to variance is 58.4%. According to this, the factor explains most of the total variance.

According to the result of factor analysis, it was found that the material weight points of the items in the scale were over .45. To determine the reliability of the scale, correlations of item total test point and Cronbach Alfa internal consistency coefficient were calculated. The Cronbach Alfa internal consistency coefficient was 0.81 in general. This proves that the scale is highly reliable (Büyükoztürk, 2010).

Self-evaluation Questionnaire: Self-evaluation scale was developed by Ministry of National Education and used as a data gathering device by some researchers (Turaçoğlu, 2011) in their studies.

Semi-structured Interview: There are eight open-ended questions concerning the applications of cooperative learning in the semi-structured interviews in the studies of Tonbul (2001) and Aydın (2009).

Activity: The study was carried out for twelve weeks in *Regional Geography* course in the Department of Geography, Faculty of Arts, Karabuk University between 2011-12 spring semester (two hours each week). The application started in the same week both in daytime education and evening education. During the study, Cooperative Learning Technique (techniques of *Student Teams Success Divisions*, *Co-learning* and *Group Research*) was used.

Gathering and Analysis of Data

At the end of the applications of cooperative learning, mean (X) and standard deviation (SS), frequency (f) and percent (%) and independent group t-test were applied to the students while evaluating their opinions and self-evaluation. In the analysis of students' opinions, *content analysis* which is one of the qualitative analysis techniques was used. For this aim, based on the opinions of the students codes and sample student statements are given place for a better comprehension. The reliability of the content analysis was calculated by using the formula ($\text{Reliability} = \frac{\text{Agreement}}{\text{Agreement} + \text{Disagreement}}$) of Miles and Huberman (1994, p. 64).

Results

Opinions of the Students of Geography Department towards the Survey of Cooperative Learning

The arithmetical mean of the points of students of Geography Department who participated in the research in the scale of cooperative learning is 3.75 and standard deviance is 1.09. According to this result, the opinions of the students of Geography

Department towards cooperative learning are in a positive level. Moreover, there is a significant difference for the points of the students in the scale of cooperative learning according to the variable of the gender of the student ($t=-1.1287$; $p>.05$). According to this finding, the level of the opinions of female and male students about cooperative learning is equal.

Answers of the Students of Geography Department to the Open-ended Questions Concerning the Applications of Cooperative Learning

As an answer to the first open-ended question (*What kind of differences do you think are there when the course we carried out with cooperative learning method and the other courses in the department are compared?*) the students of the department of Geography replied; the lessons which were carried out by cooperative learning method made learning easier ($n=22$), the lessons were more entertaining ($n=12$), participation in the lesson increased ($n=10$), cooperative working skills improved ($n=10$), there was a positive atmosphere in the class ($n=9$), the success increased in general ($n=8$) and their desire to study increased ($n=7$). When the answers to the question *What did you like about the activities (group works) of cooperative learning?* (Second open-ended question) were analyzed with content analysis the codes of “working together ($n=28$)”, “respect to other views ($n=17$)”, “friendship ($n=15$)”, “cooperation ($n=15$)” and “socialization ($n=11$)” were listed. To the third open-ended question (*What kind of developments did happen in your relationship with other group members when the studies are evaluated from beginning to the end?*) the students of the department of Geography replied that throughout the activities; they had the chance to get to know their friends better ($n=42$), there was a sincere atmosphere ($n=30$) and they frequently had the chance to chat more ($n=10$). Regarding the question *What kind of differences did you detect between this method and other courses of the department?* the students expressed; with the technique of cooperative learning their participation and interest in the courses increased ($n=36$), a sincerity emerged among the students ($n=22$), the courses were more entertaining ($n=14$), the success rate increased ($n=8$) and there was a competition among the groups ($n=4$). As an answer to fifth open-ended question “what did you feel when a group member helped you out in a subject you didn’t understand?” the students replied

“happiness ($n=33$)”, “the importance of group work ($n=10$)”, “friendship ($n=7$)” and “increase in motivation for study ($n=7$)”. The sixth open-ended question (*What did you feel when you helped a group member?*) was given an answer “being happy ($n=25$)” by the students. This reply was followed by “cooperation is a wonderful feeling ($n=11$)”, “self-confidence increases ($n=10$)”, “helpful ($n=7$)” and “being proud ($n=4$)”. To the seventh open-ended question (*Do you think that each member in this group had the equal opportunity to be successful?*) 59% of the students (45 students) replied “yes”, 31 students (41%) replied “no”. To the eighth open-ended question (*What should be done to make this activity more beneficial?*) the students replied that the groups should be formed by the students ($n=13$), the group members should be given equal opportunities in work ($n=12$) and positive dependency should be fully achieved ($n=12$).

Self-evaluation of the Students of Geography Department towards the Applications of Cooperative Learning

In this matter, 42.1% of the students stated that they came to class prepared, while 55.3% stated that they “sometimes” prepared for the class. 65.8% of the students gave the reply “always” to the expression “I used various sources while preparing my presentation”. 76.3% of the students declared that they “always” fulfilled their responsibilities in the group. 62 students (81.6%) declared that they always did their best for the success of the group. 77.6% of the students stated that they “always” listen to the ideas and suggestions of their friends in the group; while 21.1% told they “sometimes” listened to them. 48.7% of the students stated they allocated sufficient time for their studies, while 47.4% stated that they “sometimes” did it. 67.1% pointed out that they never contributed to the presentations of other groups while 25% told that they “sometimes” did.

Discussion

The answers of the students of Geography Department to the open-ended questions concerning the applications of cooperative learning show that cooperative learning has positive effects on cognitive and affective outputs. This result supports the studies (Acar, 2006; Aydın, 2009; Aydın & Buldur, 2004; Chang & Mao, 1999; Hertzog & Lieble 1996; Ilgar & Babacan, 2012; İstemil, 2011; Le Heron, Baker, & McEwen, 2006; Lyman & Foyle, 1991; Mattingly & Van Sickle, 1991; Özbaş, 2006;

Parr, 1995; Reed & Mitchel, 2001; Rich, Robinson, & Bednarz, 2000; Sezer & Tokcan, 2003; Şimşek, 2007; Tan et al., 2007; Temizbaş, 2005; Yüzer, 2005) which show that *cooperative learning in teaching of Geography* increases the success, attitudes, motivations etc. of the students.

Doymuş, Şimşek, and Şimşek (2005, p. 79) listed the basic reasons what make cooperative learning popular as such: (i) *Philosophy of Education*: is a method of active learning, (ii) *Aim*: is to enable learners in collaboration, (iii) *Start point*: Content of subject, (iv) *Process*: the students work in groups to understand the contents of subject, (v) *Student*: is a participant. He is responsible for both his learning and the other members of the group, (vi) *Teacher*: is a guide and easer, builds the groups and detects the learning aims, (vii) *Assessment and evaluation*: alternative techniques of assessment and evaluation are used throughout the process.

In the studies which show the opinions of the students about cooperative learning (Aydın, 2009; Çopur & Moğol, 2012; Demirdağ & Kartal, 2011; Gelici & Bilgin, 2011; Güngör & Özkan, 2011; Şengören, 2006; Tanel, 2006; Tonbul, 2001; Yeşilyurt, 2009) it is observed that the students declared positive opinions towards the applications of cooperative learning in general. In the study of Gelici and Bilgin (2011), the students generally stated that with cooperative learning method the courses are more entertaining; while a lot of students complained that they couldn't get on well with group members and they do not show sufficient effort.

The studies show that teacher-based learning techniques in teaching Geography decrease the interest in course and prevent students from expressing themselves. However, cooperative learning affects both cognitive and affective outputs positively. Teaching Geography should be made interesting for students and in-class activities which increase their academic success should be given place by enabling them to learn in team spirit. Therefore, higher education should give more importance to cooperative learning in teaching Geography within the bounds of possibility.

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